

USSR

BLIZNYUK, N. K., USSR Author's Certificate No 239946, class 12a, 23/03, (C 07 f), filed 20 Jun 66, published 13 Feb 70 (from RZh-Khimiya, No 21 (II), 10 Nov 70, Abstract No 21 N559 P by I. A. Mel'nikova)

■ Et, R, R", and catalyst are given, yield in %, boiling point in °C, n_{D}^{20} , d_4^{20} is prepared in a similar fashion: Me, 2,4,5-Cl₃C₆H₂, P₂S₅ + C₅H₅N, 67, 157-9/1, 1.5683, 1.4159; Me, 2-MeOC₆H₄, II, 88, 139-41/1, 1/54.00, 1.1922; Me, iso-Bu, II, 81, 65-6/2, 1.4585, 1.0010; Me, 2-ClC₆H₄, II 65, 125-7/1, 1.5310, 1.3062; Me, 2,4-Cl₂C₆H₃, II, 77, 142-3/0.5, 1.5500, 1.3177; Me, beta-naphthyl, II, 70, 176-8/0.5, 1.5720, 1.1811; PhCH₂, II, 58, 219-22/1, 1.5850, 1.3230; Me, alpha-naphthyl, (PhO)₂P(S)SR, 66, 176-9/1, 1.5980, 1.2210; Ph, beta-naphthyl, MePS₂ + Et₃N, 76, 237-40/1, 1.6260, -; Ph, 2-MeOC₆H₄, MePS₂ + C₅H₅N, 61, 174-6/1, 1.5775, 1.1627.

2/2

UDC 632.95

USSR

BLIZNYUK, N. K., PROTASOVA, L. D., KVASHA, Z. N., VAKSEVSKIY, S. L., All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"Method of Preparing Quaternary Phosphonium Chlorides"

USSR Authors' Certificate No 250130, filed 23 Mar 68, published 4 Jan 70 (from RZh-Khimiya, No 20 (II), 25 Oct 70, Abstract No 20 N553P by I. M. MIL'SHTEYN)

Translation: Compounds of the general formula $\text{[}^+(\text{R})(\text{R}')\text{P}(\text{CH}_2\text{X})(\text{CH}_2\text{Y})\text{]}^+\text{Cl}^-$ (I) (R and R' = alkyl, Ph, PhCH_2 , substituted Ph, or PhCH_2 ; and X and Y are substituted or unsubstituted aryl), which may possess physiological activity, are obtained by conjugated alkylation of chloro or dichlorophosphines with benzyl chlorides at 170-320°. I_2 or Lewis acids can be used as catalyst. The process can be initiated by UV irradiation. A mixture of 0.03 mole benzyldichlorophosphine, 0.04 gram atom white Ph and 0.135 mole PhCH_2Cl is heated in a stream of N_2 until distillation of PCl_3 ceases (3-3.5 hours); excess PhCH_2Cl is distilled off the residue is dissolved in alcohol, and kept in a crystallizer 19-20 hours, and I (R = R' = PhCH_2 , X = Y = Ph) is separated out,

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BLIZNYUK, N. K., et al., USSR Authors; Certificate No 250134

yield 89.2%, melting point 225-6 (alcohol-acetone). Analogously obtained are the following I (enumerated are R = R', X = Y; yield melting point in °C): 4-ClC₆H₄CH₂, 4-ClC₆H₄, 96.5, 235-6; 2,4-Cl₂C₆H₃CH₂, 2,4-Cl₂C₆H₃, 58, 140-142; 2-ClC₆H₄CH₂, 2-ClC₆H₄, ~100, --. Analogously obtained are the following I (enumerated are R, R', X = Y; yield, melting point in °C): Ph, 4-ClC₆H₄CH₂, 4-ClC₆H₄, ~100, --; Ph, PhCH₂, Ph, ~100, 128-30 (acetone); Ph, 2,4-Cl₂C₆H₃CH₂, 2,4-Cl₂C₆H₃, ~100, 160-2 (alcohol-acetone); 4-MeC₆H₄, PhCH₂, Ph, ~100, 85-7; C₉H₁₉, PhCH₂, Ph, ~100; Ph, 4-ClC₆H₄CH₂, Ph, ~100, 115-6.

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USSR

UDC 632.95

BLIZNYUK, N. K., KVASHA, Z. N., VASHAVSKIY, S. L., and TADSHARA, G. A.,
All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry
of Agriculture USSR

"A Method of Preparing Mixed Esters of Dithiophosphonic Acids"

USSR Authors; Certificate No 222384, filed 26 Oct 66, published 20 Jan 70
(from Referativnyy Zhurnal Khimii, No 17, 10 Sept 70, Abstract No 17 1594 F)

Translation: A mixture of 0.03 g-mole of acid chloride of S-ethyl methylthio-
phosphonic, 0.12 g-mole alcohol, 1 mole P_2S_5 and 2 mole pyridine is heated for
4 hours at 90-100°C, and O,S-diethyldithiophosphonate, $C_4H_9O_2S_2$, is
isolated with a yield of 82% and a boiling point of 78-80°C/2, $n_{D20} =$
1.5510. O-Methyl-S-phenyldithiophosphonate $C_6H_5O_2S_2$ is also prepared
with a yield of 100%, melting point of 46-7°C, $n_{D20} = 1.6125$.

T. A. Belyayova

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USSR

UDC: 632.05

BLIZNYUK, N. K., PROTASOVA, L. L., KVASHA, Z. N., LEVSKAYA, G. S.,
VARSHAVSKIY, S. L., and BARANOV, Yu. I., "A Union Research Institute of Plant
Pathology

"A Method for Preparing 1,4-Phenylene-bis-O-Alkyl-oxy-2,2,2,-Trichloroethyl-
phosphinates"

USSR Author's Certificate No 255266, filed 27 Jun 68, published 24 Mar 70
(from RZh-Khimiya, No 22, 25 Nov 70, Abstract No 22 N653 P by G. V. Kuznetsova)

Translation: Phosphinates with the general formula $\text{OCCl}_2\text{CH}(\text{OH})\text{P}(\text{OR})(\text{O})\text{C}_6\text{H}_4\text{P}-$
 $(\text{O})(\text{OR})\text{CH}(\text{OH})\text{CCl}_2$ (I) ($\text{R}=\text{C}_1-\text{C}_n$ -alkyl; from here on the substitutes are in the
para-position) are obtained from the reaction of $\text{ROPH}(\text{O})\text{C}_6\text{H}_4\text{PH}(\text{O})\text{OR}$ with
 $\text{CCl}_2\text{CH}(\text{OH})_2$ in an organic solvent medium under conditions of azeotropic dis-
tillation of water. The original phosphonites are formed by the action of
excess alcohol on $\text{Cl}_2\text{PC}_6\text{H}_4\text{PCl}_2$ (II). A mixture of 0.7 mole of $\text{C}_6\text{H}_4\text{Cl}_2$, 1 g-
ram of white phosphorus, 300 ml of PCl_3 , and 3 g of I, is heated for 6
hours in a stainless steel autlave at $50-60^\circ$. After cooling the excess
 PCl_3 is driven off and 143.3 g (63.3%) II is obtained by distilling the resi-
due, boiling point $132-3^\circ/1$, melting point $58-9^\circ$. A solution of 0.02 mole of
II in 30 ml of CCl_4 is added at $0-5^\circ$ and while being reduced to 0.4 mole of ab-
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BLIZNYUK, N. K., et al, USSR Author's Certificate No 255266, filed 27 Jun 68, published 24 Mar 70 (from RZh-Khimiya, No 22, 25 Nov 70, Abstract No 22 1653 P by G. V. Kuznetsova)

solute MeOH. The excess MeOH and HCl is removed under vacuum (toward the end at 80°) and 0.04 mole of $\text{CCl}_3\text{OH}(\text{OH})_2$ and 50 ml of C_6H_6 is added to the residue. The mixture is boiled with Dean-Stark packing until water is no longer driven off. C_6H_6 is distilled under vacuum and I (R=Me) obtained in the residue, yield 96% (in II), melting point 146-9°. The part I are obtained in a similar fashion (R, yield in %, and melting point in °C (ethyl alcohol) are given): Et, 97, 186-7; Pr, 85, 190-1; Bu, 61, 186-7; and iso-Bu, 66, 198-9. I can be used as intermediate products in the synthesis of physiologically active substances.

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USSR

UDC 547.241.07

BLIZNYUK, N. K., PROTASOVA, L. D., KVASHA, Z. N., and VARSHAVSKIY, S. L., All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"A Method of Synthesizing 1,4-Phenylenehexabenzylidiphosphonium Chlorides"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztzy, Tovarnyye Znaki, No 14, 1970, Author's Certificate No 266418, filed 7 Jun 68, p 23

Abstract: This Author's Certificate introduces: 1. A method of synthesizing 1,4-phenylenehexabenzylidiphosphonium chlorides. The distinguishing feature of this procedure is that 1,4-phenylene-bis-dichlorophosphine is interacted with substituted benzylchloride and white phosphorus in the presence of heat with subsequent isolation of the goal product by conventional methods. 2. The method described in (1) is distinguished by the fact that the temperature reaches 170-220°C.

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USSR

UDC: 547.26'113.07

BLIZNYUK, N. K., LEVSKAYA, G. S., KVASHA, Z. N., VARSHAVSKIY, S. L., All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"A Method of Producing 1,4-Bis-(Dialkyl- or Dibenzyltrithiophosphoryl)benzene"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztzy, Tovarnyye Znaki, No 3, 1970, p 32, patent No 259881, filed 1 Jul 1968

Abstract: This Author's Certificate introduces: 1. A method of producing 1,4-bis-(dialkyl- or dibenzyltrithiophosphoryl)benzene. The distinguishing feature of the method is that 1,4-bis-(dichloroethiophosphoryl)benzene is interacted with alkyl halides or benzyl halides and hydrogen sulfide accompanied by heating in the presence of a catalyst with subsequent isolation of the product by conventional methods. 2. A modification of this method in which the distinguishing feature is that the process is carried out at a temperature of 120-170°C. 3. Another modification of the method described in sections 1 and 2 with the distinguishing feature that an organic base such as pyridine is used as the catalyst.

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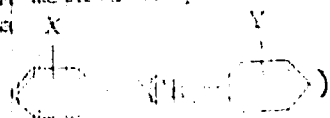
UDC: 547.341.07

BLIZNYUK, N. K., PROTASOVA, L. D., KVASHA, Z. N., All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"A Method of Producing Aryldibenzylphosphine Oxides"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztzy, Tovarnyye Znaki, No 3, 1970, p 32, patent No 259880, filed 14 Oct 68

Abstract: This Author's Certificate introduces: 1. A method of producing aryldi-benzylphosphine oxides of general formula X



based on arylchlorophosphines, where X and Y are hydrogen, an alkyl, or a halide. The distinguishing feature of the method is that the process is simplified and readily available initial compounds are utilized by interacting aryldichlorophosphine with benzyl chloride and elemental phosphorus

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USSR

BLIZNYUK, N. K., et al., Otkrytiya, Izobreneniya, Promyshlennyye khimisty, Tovarnyye Znaki, No 3, 1970, p 32, patent No 259880, filed 14 Oct 68

accompanied by heating. The reaction mixture is then boiled with an alkali and the product is isolated by conventional methods. 2. A modification of this method whose distinguishing feature is that the process is carried out at a temperature of 170-200°C.

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USSR

K UDC 632.95

BLIZNYUK, N. K., KVASHA, Z. N., PROTASOVA, L. D., and VARSILAVSKIY, S. L., All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"Method of Producing Pyrocatechin Chlorophosphites"

USSR Authors' Certificate No 250139, filed 10/05/67, published 4/01/70 (from Referativnyy Zhurnal Khimii, No 16 (II), 25 Aug 70, Abstract No 16 N676 P by I. A. Mel'nikova)

Translation: A mixture of 1.125 mole PCl_3 , 0.75 mole pyrocatechin and 0.6 g $\text{C}_5\text{H}_5\text{N}$ is heated 1.5-2 hr with agitation at 60-80° in a current of dry N_2 , separating pyrocatechin chlorophosphite (I) with a yield of 91-95%; b. p. 78°/9, n_D^{20} 1.5672. I is an organic synthesis intermediate.

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1/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--METHOD FOR OBTAINING ARYLDIBENZYLPHOSPHINE OXIDES --U-

AUTHOR--(03)-BLIZNYUK, N.K., PROTASOVA, L.D., KVASHA, Z.N.

COUNTRY OF INFO--USSR

SOURCE--AUTHOR CERTIFICATE NR 259880
REFERENCE--OTKRYTIYA, IZOBRET. PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, NO 3,
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZENE DERIVATIVE, PHOSPHORUS OXIDE, ORGANIC PHOSPHORUS
COMPOUND, CHEMICAL SYNTHESIS, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/1770

STEP NO--UR/0482/10/000/0000/0000/0000

CIRC ACCESSION NO--AA0137010

UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AA0137010
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD IS DESCRIBED FOR
OBTAINING ARYLO(BENZYLPHOSPHINE OXIDES OF THE GENERAL FORMULA: WHERE X
AND Y ARE HYDROGEN, ALKYL, OR HALOGEN GROUPS. ARYLOCHLOROPHOSPHINE IS
REACTED WITH BENZYL CHLORIDE AND ELEMENTARY PHOSPHORUS. THE REACTION
MIXTURE IS HEATED TO BOILING (170-200 °C) WITH AN ALKALI AND THE FINAL
PRODUCT IS SEPARATED BY KNOWN METHODS. FACILITY: VSESOYUZYNY
NAUCHNO-ISSLEDOVATELSKIY INSTITUT FITOPATOLOGII

UNCLASSIFIED

USSR

UDC: 550.34.034.681.142.62

KVASHIN, Ye. V. and CHERMASHENTSEV, S. A.

"Operative System for Seismological Data Input to an Electronic Computer"

Tashkent, Izvestiya Akademii Nauk' Uzbekskoy SSR--Seriya Tekhnicheskikh Nauk, No 6, 1973, pp 7-9

Abstract: An important and complex problem is the input of multi-channel analog signals into an electronic computer directly from objects under observation, with simultaneous operative processing. The purpose of this article is to consider the input of seismological information continuously, through radio relay channels, into a central processing point equipped with the Minsk-22 computer from four seismic stations in the Tashkent geodynamic polygon. A system for gathering this information and automatically processing it is proposed in this article, together with a diagram and a textual description of the units involved and their interconnection. The units are listed and their functions outlined. It is noted that a working design and mock-ups of the various units of the system have been developed.

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- 25 -

1/2 031 UNCLASSIFIED PROCESSING DATE--0206170
TITLE--A DEVICE FOR RECEPTION OF ORTHOGONAL BROAD BAND RADIO SIGNALS -J-
AUTHOR--(04)--ZUYEV, V.I., IOSHCHENKO, A.N., KVASHNIN, YE.F., SAVINYKH, V.L.
COUNTRY OF INFO--USSR
SOURCE--PATENT NO 262940
REFERENCE--MUSCOW, OTKRYTIYA, IZOBRET. PROM. OBRATISY, TEKHNIYE ZNANIYA
DATE PUBLISHED--04FEB70
SUBJECT AREAS--NAVIGATION, ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS--BROADBAND COMMUNICATION, ORTHOGONAL FUNCTION, SIGNAL RECEPTION,
ELECTRONIC CIRCUIT, COMMUNICATION CHANNEL, SIGNAL DETECTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FILEL/FRAME--1992/1100 STEP NO--UP/0482/70/000/000/ Y000/0001
CIRC ACCESSION NO--AA0112222

UNCLASSIFIED

2/2 031

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AA0112222

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIS AUTHOR'S CERTIFICATE INTRODUCES A DEVICE FOR RECEPTION OF ORTHOGONAL BROAD BAND RADIO SIGNALS. THE UNIT CONTAINS CHANNEL MULTIPLIERS, NOISE GENERATORS, INTEGRATORS AND A COINCIDENCE CIRCUIT. IT DIFFERS BECAUSE TO PROVIDE FOR COHERENT RECEPTION OF WIDE BAND SIGNALS, THE SIGNAL FROM THE OUTPUT OF THE CHANNEL MULTIPLIERS IS FED TO THE SIGNAL INPUTS OF THE CORRESPONDING COHERENT CHANNEL DETECTORS, WHILE A COMMON SINUSOIDAL REFERENCE VOLTAGE FROM THE OUTPUTS OF THE CHANNEL MULTIPLIERS IS SIMULTANEOUSLY APPLIED ACROSS THE SECOND INPUT OF THE COHERENT DETECTORS THROUGH A SUMMING CIRCUIT, NARROW BAND FILTER AND PHASE INVERTER.

UNCLASSIFIED

USSR

UDC 911.3.616.988.43(571.13)

YPIFANOV, G. F., and KVASHNIN, N. P.

"The Epizootic Distribution of Foot-and-Mouth Disease in Omskaya Oblast"

Nauch. tr. Omsk. vet. in-t. (Scientific Works of the Omsk Veterinary Institute) 1970, 27, No 2, pp 41-42 (from RZh-Zo. Meditsinskaya Geografiya, No 1, Jan '71, Abstract 1.36.103)

Translation: Foot-and-mouth disease in Omskaya Oblast is distributed through the south and east where cattle-raising is more intensive. It occurs only rarely in the north; the Ust'-Isimskiy rayon, for example, has had no cases for the last 25 years. In the oblast types of foot and mouth disease are: type O, variant O₂, type A, variant A₇, while in 1967 the foot-and-mouth disease epizootic was caused by type A virus, variant A₂₂. The study of viral type over the last 11 years yields data indicating that virus types change every 3-4 years. In 1963-1968 there was a significant decrease in the disease distribution. By November 1967, foot-and-mouth disease type O and A--variant A₇ were eradicated in the oblast.

1/1

USSR

UDC: 621.391.825(008.8)

ZUYEV, V. N., IOSHCENKO, A. N., KVASHNIN, Ye. F., SAVINYKH, V. L.

"A Reception Device for Orthogonal Wide-Band Radio Signals"

USSR Author's Certificate No 262940, filed 5 May 68, published 3 Jun 70
(from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11D96 P)

Translation: The device introduced by this patent provides coherent reception of orthogonal wide-band signals by the method of synchronous heterodyning. Signals are fed from the output of channel multipliers to the signal inputs of the corresponding coherent channel detectors. A common sinusoidal reference voltage from the outputs of the channel multipliers is fed to the second input of the coherent channel detectors through an adder, narrow-band filter and phase shifter. The device is designed for radio telegraph communications systems with an active pause. N. 8.

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USSR

UDC 621.391.625

K
ZUYEV, V. N., IOSHCENKO, A. N., KVASHNIN, Ye. F., SAVINYKH, V. L.

"A Device for Reception of Orthogonal Broad-Band Radio Signals"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztzy, Tovarnyye Znaki,
No 7, 4 Feb 70, p 36, Patent No 262940, Filed 5 May 68

Translation: This Author's Certificate introduces a device for reception of orthogonal broad-band radio signals. The unit contains channel multipliers, noise generators, integrators and a coincidence circuit. It differs because to provide for coherent reception of wide-band signals, the signal from the output of the channel multipliers is fed to the signal inputs of the corresponding coherent channel detectors, while a common sinusoidal reference voltage from the outputs of the channel multipliers is simultaneously applied across the second input of the coherent detectors through a summing circuit, narrow-band filter and phase inverter.

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1/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DEHYDROGENATION OF ETHANOL TO ACETALDEHYDE ON A SKELETAL COPPER
CATALYST -U-
AUTHOR-(03)-VUKELSON, I.I., TEREKHIN, R.M., KVASHNINA, S.P.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(2), 83-7
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CATALYTIC DEHYDROGENATION, ETHANOL, ALDEHYDE, COPPER, CATALYST
REGENERATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0817 STEP NO--UR/0064/70/046/002/0083/0087
CIRC ACCESSION NO--AP0124484
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124484

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CATALYST FOR THE DEHYDROGENATION OF ETH TO ACH WAS PREPD. BY QUENCHIN A CU AL ALLOY CONTG. 56.5PERCENT CU AND LEACHING THE AL WITH 10PERCENT NAOH AT 15-80DEGREES. THE CATALYST HAD SP. SURFACE 27 M PRIME2-G, AND THE RATE CONST. OVER IT WAS 0.41 AND 2.04 MIN PRIME1 NEGATIVE AT 190 AND 250DEGREES, RESP. OVER THIS CATALYST, THE REACTION WAS MORE SELECTIVE THAN ON COM. CATALYST (CU ON DIATOMITE), I.E., THE DEGREE OF CONVERSION OF ETH TO ETOAC DID NOT EXCEED 10-12PERCENT AND THE CONCN. OF ACH IN THE PRODUCT (AT 210-70DEGREES 6 VOL-HR) WAS 21.2PERCENT, COMPARED WITH 18.6PERCENT ON THE COM. CATALYST. THE SERVICE LIFE OF THE CATALYST WAS GREATER THAN OR EQUAL TO 700 HR, AND IT COULD BE REGENERATED BY TREATMENT WITH ALK. SOLN.

UNCLASSIFIED

USSR .

UDC 619:616--002.828--07(084)

SARKISOV, A. Kh., KOROLEVA, V. P., KVASHNINA, Ye. S., and GNEZIN, V. F.
Diagnostika Gribnykh Bolezney (Mikozov i Mikotoksikozov) Zhivotnykh
(Diagnosis of Fungal Diseases -- Mycosis and Mycotoxicosis -- in Animals)

Moscow, "Kolos," 1971, 144 pp

Translation: Annotation: All types of fungal diseases found in farm animals are represented in this handbook. The agents of diseases are shown, laboratory diagnosis of pathogenic and toxic fungi are listed, and the clinical traits of the diseases and the pathological-anatomical changes they cause in animal organisms are given. The publication has more than 200 original illustrations.

The handbook is designed for veterinary specialists at kolkhozes and sov-khozes, workers at veterinary hospitals and laboratories, scientific workers, and students in the veterinary schools of institutes.

It is requested that suggestions and remarks be sent to: Moscow, Zh-472, VIEV, Laboratory of Antibiotics and Mycology.

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Brief Information on Fungi

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SARKISOV, A. Kh., et al., "Kolos," 1971, 144 pp

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SARKISOV, A. Kh., et al., "Kolos," 1971, 144 pp

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UDC 539.4.42

USSR

KAKHOVSKIY, N. I., YUSHCHENKO, K. A., MON'KO, G. G., SOLOKHIA, A. M., and
KVASNEVSKIY, O. G., Kiev, Institute of Electric Welding imeni Ye. O. Paton,
Academy of Sciences UkrSSR

"Fundamentals of Alloying Steel and Weld Metal for Structures Operating
Continuously at Low Temperatures"

Kiev, Problemy Prochnosti, No 8, Aug 70, pp 119-125

Abstract: Results are presented of a series of investigations for determining the mechanical properties of Cr-Ni-N and Cr-Ni-Mn-N steels for the purpose of establishing optimal quantities of alloying elements for obtaining austenitic-stable steels under conditions of long-duration operation at low temperatures (to -100°C). The results show that a 15% Ni content in Cr-Ni-N and Cr-Ni-Mn-N steels is sufficient for complete austenite stability. The effect of alloying metals on the mechanical properties of steels and weld metals is shown in graphs.

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USSR

UDC 539.411.5

YUSHCHENKO, K. A., KAKHOVSKIY, N. I., KVASNEYSKIY, G. G.,
MONKO, G. G., SOLOKHA, A. M., (Kiev), Institute of Electric
Welding imeni Ye. O. Paton

"The Influence of Second-Phase Separations on the Embrittlement
of High-Alloy Austenitic Steels at Low Temperatures"

Kiev, Problemy Prochnosti, No 6, 1970, pp 99-103

Abstract: In the article are presented results of research
carried out with the aim of ascertaining the influence of
nitrogen alloying upon the tendency of some austenitic steels,
used in cryogenics, toward brittle destruction. 7 figures,
1 table, 7 bibliographic entries.

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UDC 582.232-119:576.8

USSR

KVASNIKOV, Ye. I., STOGNIY, I. P., TRAVCHUK, T. P., SHCHELOKOVA, I. F.,
KLYUSHNIKOVA, T. M., and GRINBERG, T. A., Institute of Microbiology and
Virology, Academy of Sciences Ukrainian SSR, Kiev

"Blue-Green Algae From the Kremenchug Reservoir as a Raw Material for
Growing Microorganisms"

Kiev, Gidrobiologicheskii Zhurnal, Vol 7, No 6; Nov/Dec 71, pp 80-83

Abstract: Blue-green algae of the Kremenchug reservoir contain a considerable amount of polysaccharides both easy and difficult to hydrolyze, including easily accessible ones for assimilating glucose, mannose, galactose, and xylose. They are also rich in protein substances which can, upon hydrolysis, be converted into amino acids and used in the process of growing microorganisms. Algae contain a sufficient amount of ash elements, but they are poor in phosphorus. Blue-green algae contain a large selection of B-group vitamins. These algae contain all the components necessary for the development of heterotrophic microorganisms used in the brewing and food industry. The necessary number of components can be balanced.

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- 17 -

USSR

UDC 582.282.195.232-115.1+575-23

KVASNIKOV, Ye. I., PODDUBNYI, F. N., SVISHCHUK, A. A., GRINBERG, T. A., BITYUKOVA, L. B., DUBKOVA, O. M., and GRINBERG, B. G., Institute of Microbiology and Virology, Academy of Sciences Ukrainian SSR, and Institute of Organic Chemistry, Academy of Sciences Ukrainian USSR

"Adenine-Dependent Mutants of the Yeast *Rhodotorula gracilis* and Their Fat-Forming Ability"

Kiev, Tsitologiya i Genetika, No 2, 1971, pp 112-115

Abstract: The ability to synthesize lipids was studied in adenine-deficient mutants of *Rhodotorula gracilis* induced by ultraviolet radiation. The survival rate of cells decreased with increasing dose of UV rays: from 52.4% at a dose of 500 erg/mm² to 0.0028±0.0022% at a dose of 10,000 erg/mm². UV irradiation induced six auxotrophic mutants which required the presence of adenine hydrochloride (from 10 to 100 µg/ml) in the medium for good growth. The optimum dose for inducing adenine-dependent mutants was 4,000 erg/mm² which gave rise to one mutation per 5,755 cells (0.015±0.045%). The adenine-dependent mutants were found to have a low capacity for synthesizing lipids. While the control strain formed 52.4% of the lipids, the adenine-dependent mutants formed only 10.4 to 24.4%.

1/1

- 15 -

USSR

UDC 576.8.095:622.323

GOL'DENBERG, A. M., KVASNYKOV, YE. I., BOYKO, M. M., LYUBOMYRNOVA, O. H.,
PAVLENKO, M. I., PYSAKCHUK, YE. M., and KHYZHNYAK, O. O., Ivano-Frankovsk
Central Scientific Research Laboratory, and Institute of Microbiology and
Virology, Academy of Sciences UkrSSR

"Biochemical Processes During Oil Displacement Under the Influence of Bacteria
in Model Experiments"

Kiev, Mikrobiologicheskii Zhurnal, Vol 33, No 2, Mar/Apr 71, pp 234-239

Abstract: Introduction of selected cultures of gas-forming bacteria from the
genus Clostridium together with a molasses medium into an artificial model
of an oil-bearing bed (sand saturated with oil) results in higher displace-
ment of oil as compared to the control (without addition of bacteria). Most
crucial changes in the medium enriched with bacteria occur in 5-7 days at an
optimum temperature of 30°C, that is during the period of most intensive
changes in the nutrient medium and maximum gas production. At that time the
surface tension at the interphase culture medium-air is lowered, the amount
of organic acids and ethanol is increased and the pH of the medium is lowered.
The specific gravity of the oil exposed to bacteria is lowered by 0.0018-
0.0096 g/cm³, and its viscosity is lowered by 0.51-3.0% est, without any
changes in its fractional composition.

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USSR

UDC 621.791:539.378.3:62-225:62.19

KULIK, S. G., KAMINSKIY, A. N., and OZEROV, Ye. A., Engineers, and
KVASNITSKIY, V. F., Candidate of Engineering Sciences

"Effectiveness of Nozzle Blades Made by Diffusion Welding Through an
Intermediate Layer"

Moscow, Svarochnoye Proizvodstvo, No 1, Jan 73, pp 32-34

Abstract: The purpose of this work was to investigate the efficiency of full-scale nozzle blades produced by vacuum-diffusion welding through an intermediate metal layer. The usual method of welding, in which the metals being joined are melted, such as high-alloy heat-resistant alloys EP99, VKh4A, E16G2, etc., results in the formation of hot cracks in the seam metal and heat-affected zone. For intermediate layers VPr7 and VPr11 brazing alloys and 1Kh18N9T steel were used which were 0.1 mm thick.

The welded blades were subjected to both thermal cycling and mechanical loads of 3000 cycles and 16 or 22 kgf/mm², respectively. Results of these tests showed that damage characteristic of thermal fatigue was not detected when the samples were subjected only to thermal cycling; however, when subjected

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USSR

KULIK, S. G., et al., Svarochnoye Proizvodstvo, No 1, Jan 73, pp 32-34

to both conditions the samples exhibited some cleavage. Of the three materials tested as intermediate welding strips, LKh18N9T steel showed the best results, with VPr7 brazing alloy coming in last. Five figures, 1 table, 4 bibliographic references.

2/2

Instruments and Measurements

USSR

UDC: 621.37/39(075)

KVASHITSKIY, V. N., LEVINTOV, A. G., YURIN, O. N.

"Electric Circuits in Radio Electronics and Instrument Building"

Elektricheskiye skhemy v radioelektronike i priborostroyenii (cf. English above), Moscow, "Svyaz", 1971, 191 pp, ill. 77 k. (From RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A13 K)

Translation: All types of circuits which incorporate a unified system of design documentation are considered in the book. Recommendations are introduced on compiling circuit documentation for various groups of articles. A method is described for automatic circuit design by computer. The book is written for engineering and technical workers dealing with problems of creating and checking out circuit documentation, and may be useful for college and university students. A. K.

1/1

1/2 007 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--SOME TRENDS IN DEVELOPMENT OF SCIENTIFIC FOUNDATIONS FOR
STANDARDIZATION -U-
AUTHOR-(02)-KVASNITSKIY, V.N., LEVINTOV, A.G.
COUNTRY OF INFO--USSR
SOURCE--STANDARTY I KACKESTVO, 1970, NR 5, PP 39-41
DATE PUBLISHED-----70
SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES
TOPIC TAGS--STATE OF STANDARIZATION, MATHEMATIC METHOD, ACCURACY STANDARD
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/0108 STEP NO--UR/0422/70/000/005/0039/0041
CIRC ACCESSION NO--AP0122374
UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0122374

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS DEFINE THE AIMS OF THE SCIENCE OF STANDARDIZATION. THEY STRESS THE IMPORTANCE OF MATHEMATICS IN THE CREATION OF FUNDAMENTAL BASIS FOR STANDARDIZATION. THE OBJECT AND MAJOR WAYS OF DEVELOPMENT OF THE THEORY OF STANDARDIZATION ARE SIGNLED OUT AND A NUMBER OF URGENT PROBLEMS ARE FORMULATED.

UNCLASSIFIED

USSR

UDC: 668.37.1

SEVERNYI, V. V., MINSKER, Ye. I., CHEUKIN, V. S., ~~KVASHNEVSKAYA, N. V.~~

"Optical Elastic Adhesives Based on Low-Molecular Polycyanoacrylates and Rubber Stocks"

Moscow, Priroda i Tekhnika Eksperimenta, No 3, May/Jun 72, pp 176-179

Abstract: The paper presents the results of research on the optical, physico-mechanical and thermomechanical properties of elastic self-vulcanizing cold-setting "Elastosil" cements recommended for use in the optical systems of instruments (in Cerenkov and scintillation counters in particular) at working temperatures from -80 to +200°C.

1/1

Pharmacology and Toxicology

UDC 577.1:615.7/9

USSR

KVASOV, A. P.

"Toxicological and Hygienic Study of Vinylpyrrolidone"

V sb. Gidrokhim. issledovaniya (Research In Chemical Hydrology -- Collection of Works), Makhachkala, 1972, pp 88-89 (from RZh-Biologicheskaya Khimiya, No 21, 10 Nov 72, Abstract No 21F2061 by N. I. Malakhova)

Translation: The study of the toxicological and hygienic characteristics of N-vinylpyrrolidone (I; C_4H_7NO ; classified with vinylactams; colorless liquid) proceeded on the assumption of an approximately permissible concentration of I in the air of the working zone of 1 mg/cu m. When I was administered to rats by stomach, LD_{50} was 2 g/kg; LD_{50} calculated according to the Korber method, was 1.375 ± 0.114 g/kg. When I was administered per os, the mucous membranes of the upper respiratory tract were irritated. In acute peroral administration, symptoms of irritating and narcotic effect were noted. Local action of I was weakly manifested; however, 100 percent of the experimental animals died in 1-2 days. It is concluded that I possesses sharply pronounced ability to penetrate the intact skin.

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USSR

UDC 621.396.69:621.316.6(088.8)

ANDREYEV, Yu. N., KVASOV, V. I., SEREDINA, N. N., LECNT'YEV, A. M., CHIRNIKOVA, I. F.

"A Device for Automatically Sorting Resistors into Groups by Ratings"

USSR Author's Certificate No 258227, Filed 18 Aug 65, Published 10 Apr 70 (From RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10V315 P)

Translation: The proposed device contains a drum type cassette with two columns arranged in several levels, a loading vibration hopper, transporting mechanisms, guide channels with rotating gates, a measuring unit and an actuating electromagnet. As a distinguishing feature of the patent, the work productivity of the device is increased and sorting precision is improved by utilizing a unit for storing combinations of resistance measurements connected to the transporter drive. This unit is made in the form of a hollow cylinder with movable pins around the periphery in several rows. These pins are connected to electromagnets by means of levers. The electromagnets are connected to the measurement unit and are mounted on the column of a master unit located inside the hollow cylinder. The contacts controlled by the movable pins are connected in the control circuit of the actuating electromagnet.

1/1

- 140 -

USSR

UDC: 8.74

KIRILYUK, N. I., KVASOV, V. M., ZAYTSEV, N. G., SIRCHENKO,
A. G., SOKOLOV, V. K., KHRAMOV, G. V.

"Structure and Composition of the Set of Technical Facilities
of a Typical Automated Control System"

Kibernet. i vychisl. tekhn. Resp. mezhved. sb. (Cybernetics
and Computer Technology. Republic Interdepartmental Collec-
tion), 1971, vyp. 12, pp 41-54 (from RZh-Kibernetika, No 5,
May 73, abstract No 5V772 by the authors)

Translation: The paper deals with problems of selecting the
technical complex of a typical automated enterprise manage-
ment system which are of interest in the development and
introduction of control systems.

1/1

- 109 -

1/2 026 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--USE OF SURFACE ACTIVE AGENTS FOR DRYING THE EXTERIOR FACINGS IN GAS
STORAGE WELLS -U-
AUTHOR--(04)--KARIMOV, M.F., KAYGURODOV, V.A., KVASOV, V.P., PARFENOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--GAZOV. PROM. 1970, 15(3), 23-4

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--SURFACE ACTIVE AGENT, SURFACE TENSION, NATURAL GAS, PQL
STORAGE, UNDERGROUND FACILITY, CHEMICAL DRYING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/2092

STEP NO--UR/0492/70/015/003/0023/0024

CIRC ACCESSION NO--AP0127465

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127465

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE SUITABILITY OF SURFACE ACTIVE AGENTS IS DETD. BY THEIR FOAMING CHARACTERISTICS AND ISOTHERM OF SURFACE TENSION. THEIR OPTIMUM CONCN. IS DETD. BY THE MIXING COEFF., WHICH IS DETD. BY MIXING THE SOLN. WITH N. FACILITY: UPIM. NETF. INST., UFA, USSR.

UNCLASSIFIED

ACC NR: AP9011855

SOURCE CODE: UR/0482/69/000/007/0031/0031

INVENTOR: Bayev, Ye. N. ~~Krasova, I. S.~~; ~~Makynova, M. G.~~ K

ORG: none

TITLE: High-frequency delay line with controlled delay time. Class 21, No. 236523

SOURCE: Otkrytiya, izobreteniya, promyshlennyye obratzy, tovarnyye znaki,
no. 7, 1969, 31

TOPIC TAGS: delay line, time relay

ABSTRACT: An Author Certificate has been issued for a high-frequency delay line with a controlled delay time. A delay helix is inductively coupled with the toroidal coil of a converter, which is placed on a movable (along the axis of the helix) carriage. To minimize the dimensions of the delay line and to ensure uniformity of its parameters (along its length), the delay helix is wound on a

Card 1/1

REF: ERL 275-5

ACC NR: AP9011855

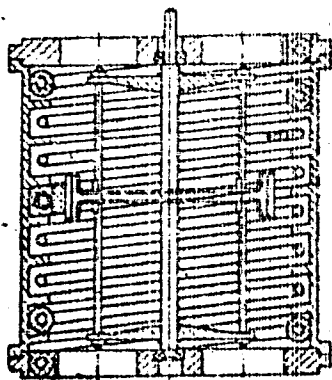


Fig. 1. Schematic of delay line

metal cylindrical helix conductor located in the helical groove of the metal shield (see Fig. 1). Orig. art. has: 1 figure. (Based on patent abstract) [WP]

SUB CODE: 09/ SUBM DATE: 22Sep67/ ATD PRESS: 7050

1/2 021 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--PROGNOSTIC IMPORTANCE OF TENSION IN RETINAL CAPILLARIES IN GLAUCOMA
SIMPLEX -U-
AUTHOR-(02)-DOBROMYSLOV, A.N., KVASOVA, M.O. K
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OFTAL'MOLOGII, 1970, NR 3, PP 19-22
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RETINA, CAPILLARY, HYPERTENSION, EYE DISEASE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0114 STEP NO--UR/0357/70/000/003/0019/0022
CIRC ACCESSION NO--AP0129370

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSIGN NO--AP0129370

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOR PROGNOSTICATION IN GLAUCOMA
SIMPLEX THE AUTHORS PROPOSE A PROGNOSTIC INDEX WHICH IS DETERMINED BY
THE DIFFERENCE BETWEEN CAPILLARY TENSION IN THE RETINA (APPRAISED
ENTOPICALLY) AND INTRAOCULAR PRESSURE. THE RESULTS ENSUING FROM
INVESTIGATIONS CARRIED OUT IN 50 PATIENTS WITH GLAUCOMA SIMPLEX SUPPORT
THE USEFULNESS OF THIS INDEX IN FORMING JUDGEMENT ON PROGNOSIS AND
CURATIVE MEASURES TO BE UNDERTAKEN. FACILITY: KAFEDRA GLAZNYKH
BOLEZNEY LENINGRADSKOGO SANITARNO-GIGIYENICHESKOGO MEDITSINSKOGO
INSTITUTA.

UNCLASSIFIED

USSR

UDC 669.205'28':521.78

PEDOTOV, S. G.; KONSTANTINOV, K. M., SINODOVA, Ye. P., and
KVASOVA, N. F., Moscow

"Decomposition of Molybdenum-Titanate Martensite"

Moscow, Izvestiya Akademii Nauk SSSR, No 5, 1973,
pp 225-230

Abstract: A study made of the decomposition processes of super-saturated α' -solid solutions of the Ti-Mo system in the whole range of their development is based on different methods of physico-chemical analysis supplemented by structural investigations. The effect of martensite decomposition processes on the mechanical properties was investigated on alloys with 8.0 and 8.6 wt% Mo; their change in Young's modulus and in mechanical properties after heating to different temperatures is shown. The decomposition of supersaturated α' -solid solutions

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USSR

FEDOTOV, S. G., et al., Izvestiya Akademii Nauk SSSR, No 5, 1973, pp 225-230

of Ti-Mo martensite (up to 6 wt% Mo) takes place in the temperature interval at continuous decrease of the temperatures of beginning and ending decomposition with increasing Mo-content. In higher alloyed alloys (6-11 wt% Mo) possessing $(\alpha+\beta+\omega)$ -phases, the temperature of beginning decomposition of the α' -component does not decrease with changing composition of the alloy; it remains on the temperature level of the decomposition of the supersaturated martensite with 6 wt% Mo. The possibility of a controllable change of the mechanical properties of the alloys in a wide range at decomposition of the martensitic structure is indicated. Five figures, 14 bibliographic references.

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USSR

UDC: 669.721:621.762

KVATER, L. I., FRISHBERG, I. V., Sverdlovsk

"Dispersion of Magnesium Powder Produced by Vacuum Condensation"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 6, 1973, pp 91-95.

Abstract: This article presents results concerning the influence of a number of technological parameters such as evaporation temperature, cooling agent temperature and residual gas pressure on the dispersion and the shape of particles of metallic magnesium condensing in the volume and on the surface. The study of the process of vacuum condensation of magnesium on a cooled moving surface showed the complexity of the powder-formation mechanism, combining crystallization of particles in the volume with growth of crystals on the surface. Increasing the evaporation temperature, with other parameters constant, improves the conditions for surface growth of crystals, reducing the dispersion of the powder and changing the form of its particles. A simultaneous increase in evaporation temperature and increase in residual pressure in the system helps to form a coarse powder. Increasing the temperature of the crystallization surface results in the formation of a powder which is more homogeneous in shape and size and more highly dispersed. In many modes of condensation, a homogeneous powder with particle sizes of 0.1-0.2 μ can be produced.

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AA0043385

Kvest, Yu. N.

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Dergent,

237416 OBJECT WEIGHT AND ITS CENTRE OF GRAVITY
COORDINATES DETERMINING DEVICE, comprising
a load platform (1) with a device for accurate
registering the object position relatively to the
load platform knife edges, e.g. a base support (2)
and a horizontal rotatable table (3) with graduation
lines. The platform rests on two independent lever
balance systems, whose summing lever (4) is
balanced by the movable weighing head (5).

The device is calibrated by separate balance-
ing of levers (4,6) by weights (7,8). During this
process the movable weighing head (5) is moved to
the stop (9), and the cursor (10) is above the groove
(1), i.e. it is not in contact with the summing
lever (4). The measurement scale is marked (11).
In order to eliminate the interaction between

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AA0043385

levers (4,6) during their balancing, they are in turn stopped by cams (stops 12,13). After the levers are balanced, the knife edge (F) is brought in contact with the bearing pad (15) by varying the push-rod (14) length, without altering the lever (4,6) balance position. Then the calibrating weight (16) is used for checking the beam (17).

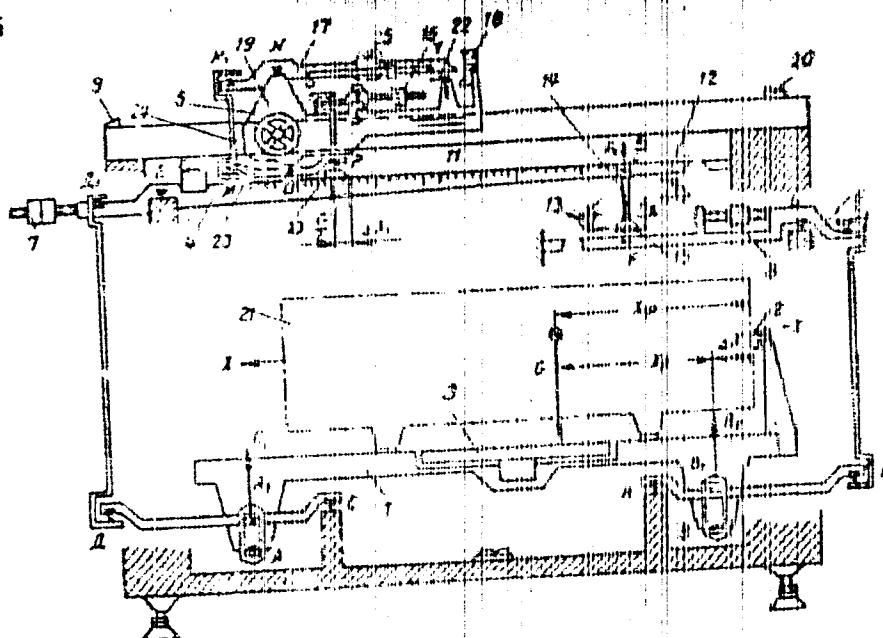
When the calibration is completed, the weighing head (5) is moved by a drive (19) to the stop (20). The cursor (6) sliding on the summing lever (4) surface, should not upset the lever systems balance. The object (21) centre of gravity is determined along the axes X, Y and Z using stops (13,22), lever (24) and weights (25).

2.1.67 as 1122898/26-10, KVEST YU N. (30.6.69) Bul B/
12.2.69. Class 42f. Int. Cl. 8 01g.

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19761657

AA0043385



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19761658

2c

1/2 017 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--USE OF INDUSTRIAL APPARATUS TO STUDY THE PREPARATION TECHNOLOGY FOR
HIGH INDEX AVIATION OILS FROM UST BALKSKII PETROLEUM, AND A STUDY OF
AUTHOR--KORELYAKOV, L.V., KVETKOV, B.A., SIDORSKAYA, L.F.

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (1), 12-14

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--TEST METHOD, PHYSICS LABORATORY INSTRUMENT, QUALITY CONTROL,
INDUSTRIAL PRODUCTION, AIRCRAFT LUBRICANT, LUBRICATING OIL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1989/1147

STEP NO--UR/0318/70/000/001/0012/0014

CIRC ACCESSION NO--AP0107636

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107636

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HIGH GRADE AVIATION OIL WITH VISCOSITY INDEX LARGER THAN OR EQUAL TO 100 WAS OBTAINED BY APPLYING ROUTINE METHODS, BUT USING SUITABLE PROPORTIONS OF SOLVENTS FOR DEASPHALTING, SELECTIVE REFINING, AND DEWAXING. CHARACTERISTICS OF THE OILS AND EXPTL. RESULTS WERE REPORTED.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--USE OF THE THERMAL NEUTRON ABSORPTION METHOD FOR DETERMINING THE
AMOUNT OF CADMIUM IN INDUSTRIAL MATERIALS --U-
AUTHOR--KVETSKINSKI, S. K

COUNTRY OF INFO--USSR

SOURCE--ZAVOD, LAB., 1970, 36, (2), 195-198

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--THERMAL NEUTRON, NEUTRON ABSORPTION, QUANTITATIVE ANALYSIS,
CADMIUM, INSTRUMENT CALIBRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/0313

STEP NO--UR/0032/10/036/002/0195/0198

CIRC ACCESSION NO--AP0129545

UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0129545

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POSSIBILITY OF USING THE ABSORPTION OF THERMAL NEUTRONS AS A METHOD OF DETERMINING CD IN INDUSTRIAL MATERIALS OF VARIOUS TYPES (POWDERS, SOLUTIONS, ETC.) CONTG. 0.01-60PERCENT CD WAS STUDIED. SPECIAL ATTENTION WAS PAID TO VARIOUS TECHNOLOGICAL FACTORS AFFECTING THE ACCURACY OF THE MEASUREMENTS. CALIBRATION CURVES WERE PLOTTED BY REF. TO STANDARD SAMPLES WITH SIMILAR CD CONTENTS, THE MEAN TIME REQUIRED FOR A SINGLE ANALYSIS WAS SIMILAR TO 5 MIN AND THE ACCURACY WAS COMPARABLE WITH THAT OF ORDINARY CHEMICAL METHODS.

UNCLASSIFIED

USSR

KONKIN, V. D. and KVICHKO, L. A., Ukrainian Scientific Research Institute of Metals

"Determination of Soluble and Bonded Aluminum in Steels Containing Titanium"

Moscow, Zavodskaya laboratoriya, No 5, 1971, pp 538-539

Abstract: A method for determining aluminum and aluminum oxides in steels containing titanium is said to be superior to that recommended by GOST 11658-65. The GOST method cannot be used for determining thousandths of a percent of aluminum content, whereas, the method described can. For determining aluminum in steels containing up to 0.2% Ti, 8 chromazurol reagent is used. This procedure is described as are procedures for determining the aluminum content of solid solutions. A table presents the results in determining the aluminum content of standard or synthetic specimens, such as the 126G and 155v types.

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USSR

UDC 632.954:631.537

KVIKLIS, A., Vitena Fruit and Vegetable Experimental Station

"The Use of Simazine in the Ovary of Vegetatively Propagated Apple Rootstocks"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 1, Jan 70, pp 48-50

Abstract: The author studied the effect of Simazine on clonal apple rootstocks in the ovary. Experiments were conducted in 1964-1967 at the Vitena Fruit and Vegetable Experimental Station in the Lithuanian SSR. The Simazine was applied in doses of 2, 3 and 4 kg/ha a. i. in October. The rootstocks used were semidwarf III, MM 106, MKh 1 and PK 14. It was found that Simazine is effective against annual weeds in the ovary of apple rootstocks. The preparation does not impair layer rooting or reduce the yield per unit area of well rooted layers. Under conditions in Lithuania it is advisable to use Simazine in a dose of 2 kg/ha a. i. on slightly weedy podzolic soils and to increase the dose to 3-4 kg/ha on weedier soils.

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1/2 015 UNCLASSIFIED PROCESSING DATE- 03/07/03
TITLE--ON THE THREE PARTICLE RELATIVISTIC PROBLEM AND THE GLAUBER TYPE
REPRESENTATION -U-
AUTHOR--(02)-KVINIKHIDZE, A.A., STOYANOV, D.
COUNTRY OF INFO--USSR
SOURCE--TEORETICHESKAYA I MATEMATICHESKAYA FIZIKA, 1970, VOL 3, NR 3, PP
332-341
DATE PUBLISHED-----70
SUBJECT AREAS--MATHEMATICAL SCIENCES, PHYSICS
TOPIC TAGS--THREE BODY PROBLEM, GREEN FUNCTION, PAIR THEORY, RELATIVISTIC
QUANTUM MECHANICS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1252 STEP NO--UR/0646/70/003/003/0332/0341
CIRC ACCESSION NO--AP0124903
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--20NOV70

2/2 015

CIRC ACCESSION NO--A20124903

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE THREE DIMENSIONAL FORMALISM OF
THREE PARTICLE RELATIVISTIC PROBLEM ON THE BASIS OF TWO TIME GREEN
FUNCTION IS DEVELOPED. IN AN APPROXIMATION WHICH IS SIMILAR TO PAIR
INTERACTION OF THE KERNELS OF RESULTING EQUATIONS ARE EXPRESSED ONLY IN
TERMS OF QUASIPOTENTIAL QUANTITIES. GLAUBER TYPE FORMULA FOR
RELATIVISTIC SCATTERING ON THE BOUND STATE IS DERIVED.
FACILITY: OB'YEDINENNY
FACILITY: OB'YEDINENNY
TBILISSKIY GOSUCARSTVENNY UNIVERSITET.
INSTITUT YADERNYKH ISSLEDOVANIY.

UNCLASSIFIED

USSR

UDC:

AKHIEZER, A. I., BAR'YAKHTAR, V. G., and KVIRIKADZE, A. G., Kharkov State University imeni A.M. Gor'kiy

"Parametric Excitation of Hypersound in Ferromagnetics"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 3, Mar 1972, pp 889-891

Abstract: The authors calculate the increment of hypersound which is caused by the oscillations of a magnetic moment of large amplitude. It is shown that in a temperature range one order of magnitude less than the Debye temperatures the increment can exceed the sound damping constant. Original article: 11 formulas and seven bibliographic entries.

1/1

1/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--DENSITY OF SPIN WAVE STATES IN AN ANTIFERROMAGNET -U-
AUTHOR--(03)--BAKYAKHTAR, V.G., POPOV, V.A., KVIRIKADZE, A.G.
COUNTRY OF INFO--USSR
SOURCE--UKR. FIZ. ZH. (RUSS. ED.) 1970, 15(1), 167-9
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--ANTIFERROMAGNETIC MATERIAL, ANTIFERROMAGNETIC THEORY, SPIN
WAVE, SPIN WAVE THEORY, EXTERNAL MAGNETIC FIELD, CHARGE DENSITY, LIGHT
ABSORPTION, LIGHT SCATTERING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1992/1449
CIRC ACCESSION NO--AP0112443
STEP NO--UR/0185/70/015/001/0167/0169
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--20 NOV 70

CIRC ACCESSION NO--AP0112443

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT WAS STUDIED OF AN
EXTERNAL MAGNETIC FIELD ON THE D. OF STATES FOR SPIN WAVES IN
ANTIFERROMAGNETS. THE D. OF STATES CHANGES IN FIELDS OF THE ORDER OF
THE EXCHANGE INTEGRAL. THIS CHANGE CAN BE OBSD. EXPTL. BY STUDYING THE
ABSORPTION AND SCATTERING OF LIGHT OR OF SLOW NEUTRONS.
FACILITY: FIZ.-TEKH. INST., KHARKOV, USSR.

UNCLASSIFIED

USSR

UDC 616.981.452-084.47

AGAFONOV, V. I., BABKIN, Ye. I., VDOVIN, D. G., VOROHEYCHIKOV, V. M.,
VOROB'YEV, A. A., GABLESHKO, Kh. P., GAPOCHKO, K. G., GEFEN, H. Ye., YEVSTODIYEV,
V. I., YEREL'YANOVA, O. V., ZENSKOV, Ye. M., ISAMALIYEV, O. G., KARALOV, I. I.,
KVIRIKADZE, V. V., KUTYEV, P. A., MISHKOV, O. P., PUSHKAEV, W. P., and
ROZDESTVENSKIY, D. A., Military Medical Academy imeni S. M. Kirov, Leningrad

"A Comparative Efficiency Characteristic of Different Immunization Methods
Against Plague Infection"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 11, 1972,
pp 106-112

Abstract: Analysis of the available literature data led to the conclusion
that oral, aerogenic, and jet immunization methods are the most efficient
compared with subcutaneous and skin methods. The average number of patients
inoculated against plague infection was 517, 817 (419), and 937 per yr for jet
injectors, aerogenic method liquid and dry vaccine, and oral method (tablets),
respectively, compared with only 43 and 28 for the subcutaneous and skin
methods, respectively.

1/1

USSR

KVITASHVILI, A. A., DZHAVAKHISHVILI, I. N. and GIORGOBIANI, Z. G.

"The Convergence of the Process of Learning of Recognition When the Method of Stochastic Approximation is Used"

Soobshch. AN GruzSSR [Reports of Acad. Sci., Georgian SSR], 1973.
Vol 69, No 3, pp 561-564 (Translated from Referativnyy Zhurnal Kiber-
netika, No 10, 1973, Abstract No 10V788)

Translation: The application of the Robbins-Monroe method to a non-parametric procedure of learning recognition of patterns is studied. The dependence of the length of the search for the optimal discriminant function with two methods of learning on the order of presentation of images during the process of learning is experimentally studied. The first -- the method of formalized learning -- assumes that the position of the weight vector changes in each step of iteration. In the second learning method -- the method with error correction, the change in the weight vector occurs only upon false assignment of an image to the wrong class. The results make the advantages of the second method obvious, consisting in a significant reduction of learning time and independence of this time on the sequence of presentation of images.

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MEDICINE
Diagnosis

USSR

UDC 616.981.136-039:616.322-002(479.22)

ESIAVA, O. P., KVITAISHVILI, G. V., and DEVDARIANI, L. G., Institute of Sanitation and Hygiene imeni Natradze, Ministry of Health, Georgian SSR, and Tbilisi Medical Institute

"A Case of Listerial Angina in Tbilisi"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 5, May 71, pp 144-145

Abstract: Listeriosis is one of the diseases which have not yet been investigated among the inhabitants of Georgia. One case of listeriosis was identified in Tbilisi in 1969 in a 6-year old boy who was admitted to the City Hospital with a diagnosis of infectious mononucleosis. He was successfully treated with streptomycin -- a total of 4,800,000 units given in doses of 200,000 units (every 12 hours and supplemented with vitamins -- and recovered after about 2 weeks, when he was discharged from the hospital. Bacteriological examinations performed on mice caught in the house where he lived were negative, and thus the source of infection was not established. Reports on the study of listeriosis among farm animals in Georgia were published in 1955, 1957, and 1965. Evidence suggests that human listeriosis in Tbilisi is more frequent

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USSR

ESIAVA, O. P., et al, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii,
No 5, May 71, pp 144-145

than the officially recorded number indicates. Therefore, whenever gram-positive motile bacilli (some coccoid forms) are found in throat smears, further biochemical, serological, and biological tests must be performed for proper identification of the microorganisms.

2/2

- 26 -

USSR

UDC: 539.3

VOROSHKO, P. P., KVITKA, A. L., TSYBENKO, A. S., Institute of Strength Problems, Academy of Sciences of the UkrSSR, Kiev

"Using the Method of Random Walks to Solve Problems in Elasticity Theory"

Kiev, Problemy Prochnosti, No 4, Apr 73, pp 53-57

Abstract: The probabilistic method of random walks over spherical surfaces is used to solve problems in elasticity theory. The paper gives the results of digital computer solution (BESM-6, FORTRAN) of the second fundamental problem of elasticity theory for a circle and a ring. The accuracy and economy of the method are studied. The results show an error of less than 5% in displacements, and less than 10% in stresses. The effective time of solution with evaluation of variance $D|\psi| \leq 0.05$ for a single point fluctuates from 1.5 to 2 minutes. With an increase in the number of random walks ($N > 30,000$), the instability of the random number generator (RNDM) places a limit on accuracy.

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- 81 -

USSR

UDC: 539.3

BOBRITSKAYA, S. D., KVITKA, A. L., Kiev

"Determination of Stress Concentration in a Plate Around a Small Aperture in the Three-Dimensional Statement of the Problem"

Kiev, Problemy Prochnosti, No 3, Mar 73, pp 47-49.

Abstract: The problem is stated as follows. A circular plate with external circumference of rather large radius is cut from an "infinite" plate with an aperture of radius a . It is assumed that stresses around the circumference are the same as in a plate without apertures. The equations for elastic equilibrium of bodies of rotation, based on the variation-difference method, are used for a new approach to the solution of the problem of the influence of circular apertures on stress distribution in a plate in extension. The results of numerical solution of this problem based on equations of the three-dimensional problem of the theory of elasticity are presented and compared with the precise analytic solution.

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USSR

UDC 539.3

BOBRITSKAYA, S. D. and KVITKA, A. I., Institute of Strength Problems, Academy of Sciences Ukrainian SSR

"Investigation of the Stress State of Thick-Wall Shells (Applicable to the Design of a Turbine Housing)"

Kiev, Problemy Prochnosti, No 3, Feb 73, pp 39-42

Abstract: Resolving equations, derived on the basis of the variation-difference method, for the deformation of solids of revolution under axisymmetrical actions were used for studying the stress state of turbine structural elements. A static calculation was carried out for the front section of a steam turbine housing which itself is a thick-wall shell of revolution consisting of a cylindrical wall connected to a toroidal bottom. Isolines of displacements and stresses were drawn and an analysis of the shell stress state was made. Calculations were made on a BESM-3M computer using a program based on the block method of Gauss. With consideration of shell and load symmetry, a system of algebraic equations of the 386th order was solved. From point displacements found, the stress tensor components were calculated on the computer. 2 figures, 2 bibliographic references.

1/1

- 60 -

USSR

UDC 539.30

KVITKA, A. L., KIYASHKO, L. YE., Institute of Problems of Strength, Academy of Sciences UkrSSR, Kiev

"Study of the Stressed State of Bodies of Rotation of Arbitrary Configuration Under Torsion. Communication 1"

Kiev, Problemy prochnosti, No. 8, Aug 71, pp 3-7

Abstract: The AL'GIER program is presented for determining stresses under torsion of a body of rotation of arbitrary form. The AL'GIER language is a hardware representation of the input language used by the AL'GIER translator. It is noted that many structural elements in modern turbines have the shape of bodies of rotation of complex form and that they are subject to a complex of external loads causing torsion, bending, stretching, and axisymmetric deformation. This article is devoted to calculating the strength of such elements under torsion. It is pointed out that it is necessary to know the greatest stresses in the zone of the structural concentrator but that it is possible to make an exact analytical determination of these stresses only for a very limited class of structures, since the majority of such problems are not subject to solution by classical methods. Computer methods are therefore applied. A

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USSR

KVITKA, A. L., KIYASHKO, L. YE., Problemy prochnosti, No. 8, Aug 71, pp 3-7

system of finite difference equations is derived for the stress state of a body of rotation of any form under torsion. Various approaches to the construction of the finite-difference grid are discussed. It is recommended that a grid of arbitrary triangles or rectangles be used to ensure the necessary bunching in the zone of structural concentrators and at the boundary of the region, and using only a minimum number of grid points in the remaining part of the region. In this case a grid of arbitrary rectangles was used to ensure a good approximation of the curved boundary.

USSR

UDC: 539.5

BOBRITSKAYA, S. D., ~~KVITKA, A. I.~~ Kiev

"Three-Dimensional Deformation of Massive, Nonuniform Bodies of Rotation, Report 2"

Kiev, Problemy Prochnosti, No 11, 1970, pp 49-53

Abstract: Equilibrium equations and stress formulas are produced, fully describing the three-dimensional deformation of massive nonhomogeneous bodies of rotation under the influence of cyclicly symmetrical loading in arbitrary, curved triorthogonal coordinates.

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USSR

UDC: 539.5

BOBRITSKAYA, S. D., KVITKA, A. L., Kiev

"Three-Dimensional Deformation of Massive, Nonuniform Bodies of Rotation. Report I"

Kiev, Problemy Prochnosti, No 11, 1970, pp 45-48

Abstract: Massive bodies of rotation are studied in a system of axisymmetrical, orthogonal coordinates when subjected to arbitrary surface and mass forces in an arbitrary temperature field. A system of equations in displacements is formulated on the basis of the variational principle of Lagrange.

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USSR

UDC 621.37/39+631.004

NEKRASOV, M. M., LAVRINENKO, V. V., OSADCHUK, V. S., KVITKA, N. A., KOVAL'CHUK, B. M.

"Low-Frequency Dielectric Transformers"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 69-70

Abstract: A study is made of the problems of creating low-frequency dielectric transformers. Several versions of the designs of such transformers are investigated, and data are presented for individual specimens. Conclusions are drawn regarding the prospects of utilization of low-frequency dielectric transformers. In the transformers, the transformation coefficient depends to a significant extent on the magnitude of the input signal. With a load of 10^6 ohms and an input voltage of 0.1 volts, it reaches values on the order of 20 for one of the investigated transformers manufactured on the basis of the type TsTS-23 ceramic. A formula is presented showing that the basic parameters affecting the resonance frequency of piezotransformers of the flexible type are the length and thickness of the plates. The parameters of several designs of piezotransformers and their operating frequencies are presented in a table.

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- 18 -

USSR

UDC 621.37/39+631.004

NEKRASOV, M. M., LAVRINENKO, V. V., OSADCHUK, V. S., EVITSA, N. A.,
and KOVAL'CHUK, B. N.

"Low-Frequency Dielectric Transformers"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No. 6, 1971,
pp 69-70

Abstract: This short informative article amounts to an introductory treatment of the development of piezoelectric transformers with an operating frequency of 50 and 400 Hz, of the type widely used in technology. A schematic diagram of piezoelectric transformers of the bending type is shown and explained; it consists of two dielectric plates glued together with epoxy resin, and connected through copper or silver electrodes to the external circuit. The theory of operation of the transformer is explained in qualitative terms, and a formula for the fundamental frequency of the bending oscillations is given in terms of the Young's modulus, the density, the thickness, and the length of the second -- i.e., the output or bending -- plate of the transformer. Curves are plotted for the transformer characteristic as a function of the bending magnitude; they indicate that the transformation characteristic depends essentially on the

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USSR

NEKRASOV, M. M., et al., Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 69-70

input signal amplitude and the applied voltage. The data was taken for transformer type No 3, made from ceramics of the TsTS-23 brand. The authors are with the Kiev Polytechnical Institute.

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1/2 029 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CENTRAL NEUROTROPIC ACTIVITY OF AMINOPROPYL AND AMINOPROPIONYL
DERIVATIVES OF IMINOBENZYL AND DIPHENYLAMINE AND ITS RELATION TO THE
AUTHOR--(04)-LAPIN, I.P., KSENOFONTOVA, T.A., KYLIK, L.YA., PORAYKOSHITS,
B.A.
COUNTRY OF INFO--USSR
SOURCE--FARMAKOLOGIYA I TOKSIKOLOGIYA, 1970, VOL 38, NR 1, PP 8-13
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--NERVOUS SYSTEM DRUG, MOUSE, RESERPINE, CHOLINERGIC, TOXICITY,
IONIZATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FKAME--3004/1368 STEP NO--UR/0390770/003/001/0003/0013
CIRC ACCESSION NO--AP0131791
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131791

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. EXPERIMENTS WITH MICE SHOWED THAT THE DECREASE IN THE BASICITY OF THE AMINO GROUP IN THE SIDE CHAIN OF THE COMPOUNDS GIVEN IN THE TABLE BELOW IS ACCOMPANIED BY REDUCTION, OR EVEN DISAPPEARANCE OF THE ANTIRESERPINE, ADRENOPHILIC, AND CHOLINOLYTIC ACTIVITY. IT IS ASSUMED THAT SUCH ACTIVITY REQUIRES THAT THE PKA OF THE AMINO GROUP BE KEPT ABOVE 8.3. NO CORRELATION WAS SHOWN BETWEEN THE TOXICITY OF THE COMPOUNDS INVESTIGATED AND THEIR PKA VALUES.

UNCLASSIFIED

1/2 010
TITLE--SYNTHESIS AND REACTIONS OF CHLOROPYRAZOLE ALDEHYDES -U-
AUTHOR--(03)-PORAIKOSHITS, B.A., KVITKO, I.YA., SHUTKOVA, E.A.
COUNTRY OF INFO--USSR
SOURCE--KHIM. FARM. ZH. 1970, 4(3), 19-24
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHLORINATED ORGANIC COMPOUND, ALDEHYDE, ORGANIC AZOLE
COMPOUND, CHEMICAL SYNTHESIS, MOLECULAR STRUCTURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0290
STEP NO--UR/0450/70/004/003/0019/0024
19283

UNCLASSIFIED

PROCESSING DATE--16OCT70

2/2 010

CIRC ACCESSION NO--AP0119283

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SERIES OF I AND II WAS PREPD. A COLD (0-5DEGREES) MIXT. OF 17.5 G DMF, 71.2 G POOL SUBS, AND 22.4 G I (R EQUALS H) (III) WAS SLOWLY HEATED TO 80DEGREES, THEN HEATED 8 HR AT 80DEGREES TO YIELD 70PERCENT (R PRIME1 EQUALS H, R PRIME2 EQUALS CL) (IV), M. 78-9DEGREES (PETROLEUM ETHER). ANALOGOUSLY, 60PERCENT 5,CHLORO,1,METHYL,3,PHENYL, PYRAZOLE,4,CARBOXALDEHYDE, M 63DEGREES (ETOH), WAS PREPD. ADDITIONAL PREPD. AND DERIVS. SHOWN ON MICROFICHE. FACILITY: LENINGRAD. TEKHNOL. INST. IM. LENSOREYA, LENINGRAD, USSR.

UNCLASSIFIED

UDC 575.111/24:582.259

USSR:

MUKHAMADIYEV, B. T., KVITKO, K. V., and ZALENSKIY, C. V., Botanical Institute
Imeni V. L. Komarov, Academy of Sciences, USSR Leningrad; Institute of the
Physiology and Biophysics of Plants, Academy of Sciences Tadzhik SSR, Dushanbe;
and Chair of Genetics and Selection, Leningrad State University

"Chlorella Mutants Resistant to the Photophosphorylation Inhibitor 3(3,4)-
Dichlorophenyl-1,1-Dimethylurea (DCMU). II. Mutagenic Effects of DCMU on
Different Strains"

Moscow, Genetika, Vol 7, No 5, 1971, pp 36-41

Abstract: In concentrations of 10^{-3} to 5×10^{-3} M, DCMU has both lethal and
mutagenic effects on Chlorella strains of two different origins: Chlorella
vulgaris original strain B and its more resistant mutant B41 and Chlorella
pyrenoidosa original strain 82 and its more resistant mutant 82. Equal
concentrations of DCMU inhibit the original strains to a much greater degree
than the mutants. After Chlorella cells adapt to DCMU, its lethal effect
becomes considerably smaller. Adaptation to DCMU does not eliminate its
mutagenic effect in the above-mentioned concentrations; as a result, the
resistant strains are more mutable. The mutations include: 1) mutants which
restore their pigment to initial color in the light but lose it again in
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USSR

MUKHAMADIYEV, B. T., et al., Genetika, Vol 7, No 5, 1971, pp 36-41

darkness; 2) mutants which die in the light; and 3) mutants which partly preserve their pigment. The mutagenic effect of DCMU is considerably smaller than that of N-nitroso methylurea, while its lethal effect is markedly greater.

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- 16 -

USSR

UDC 582.285.22:576.8.093

MIKHAYLOVA, L. A., KVITKO, K. V. All Union Institute of Plant Growing; Leningrad State University imeni A. A. Zhdanov

"Laboratory Methods of Culturing *Puccinia recondita* f. sp. *tritici* Rob. ex Desm., the Agent of Brown Leaf Rust of Wheat"

Leningrad, Mikologiya i Fitopatologiya, No 3, 1970, pp 269-273

Abstract: A detailed description is given of several laboratory methods suitable for: (i) growing *Puccinia recondita* under nonsterile conditions, (ii) testing large numbers of clones to detect mutants and study the lethal effect of mutagens on the spores, (iii) differentiating races, (iv) testing grain varieties for resistance to various rust races, and (v) culturing the fungus under sterile conditions. All these methods preserved the genetic purity of the parasite, something that cannot be easily achieved in a greenhouse.

1/1

USSR

UDC 669.184.244.66

BLINOV, K. A., VERBITSKIY, YA. D., AFANAS'YEV, S. G., ~~KVITKO, M. F.~~, and PILATOV, YU. V.

"Study of the Interaction of the Gas Stream With the Liquid Bath on Cold Models"

Proizvodstvo Chernykh Metallov (Production of Ferrous Metals-Collection of Works.) No 75, Metallurgiya Press, 1970, pp 89-93

Translation: Problems of the formation and removal of spray from the throat of a converter and along its height are discussed. Experiments were performed using a cold model of a 10 T converter. The liquid modeling the metal was ordinary water.

It was established that the nature of the change in spray transfer for all types of heads studied was identical, although the rate of reduction of the quantity of spray in the throat of the model was higher upon transition to higher oxygen flow rates for a 13-nozzle tuyere than for other types. The characteristics produced indicate that when the oxygen converter process is intensified, tuyere designs should be used providing the maximum breakup of the gas stream, in order to avoid splashing and loss of metal. 5 figures; 6 biblio. refs.

1/1

UDC 669.184.244.66

USSR

BLINOV, K. A., VERBITSKIY, YA. D., APANAS'YEV, S. G., KVITKO, M. P., and FILATOV, YU. V.

"Study of the Interaction of the Gas Stream With the Liquid Bath on Cold Models"

Proizvodstvo Chernykh Metallov (Production of Ferrous Metals-Collection of Works,) No 75, Metallurgiya Press, 1970, pp 89-93

Translation: Problems of the formation and removal of spray from the throat of a converter and along its height are discussed. Experiments were performed using a cold model of a 10 T converter. The liquid modeling the metal was ordinary water.

It was established that the nature of the change in spray transfer for all types of heads studied was identical, although the rate of reduction of the quantity of spray in the throat of the model was higher upon transition to higher oxygen flow rates for a 13-nozzle tuyere than for other types. The characteristics produced indicate that when the oxygen converter process is intensified, tuyere designs should be used providing the maximum breakup of the gas stream, in order to avoid splashing and loss of metal. 5 figures; 6 biblio. refs.

1/1

USSR

UDC:649.184.244.66

KVITKO, M. P., SERGEYEVA, T. K., FILATOV, Yu. V., SINEL'NIKOV, V. A., and
USTYUZHANIN, V. D.

"Study of the Oxygen-Fuel Process"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of
Works], No 75, Metallurgiya Press, 1970, pp 133-142

Translation: The possibility of increasing the thermal balance of a converter
by preliminary heating of the scrap by burning of natural gas and oil in pure
oxygen is studied on a 10 T converter. The expenditure of scrap melted using
the fuel is 21.3-34.2% of the mass of the charge metal. The losses of heat
due to chemical incompleteness of burning are estimated for various versions,
and the effectiveness of the use of various types of fuel is considered.
The utilization factor for natural gas is 24.0-86.0%, for oil 34.0-63.0%.
11 figures; 3 tables; 6 biblio. refs.

1/1

USSR

UDC:669.18:-147:621.746

POLYAKOV, V. V., SHORSHIN, V. N., NEKHAYEV, V. P., KVIKHO, A. P., SINEL'NIKOV, V. A., FILATOV, Yu. V., YUGOV, P. I., and USTYUZHANIN, V. D.

"Study of Technology of Melting in an Oxygen Converter and Pouring of Type K-76 Rail Steel in a Continuous Casting Unit"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 123-132

Translation: Results are presented from a study of a new, progressive metallurgical process--the production of railroad rails of high-quality ingots produced by continuous casting in combination with melting of rail steel in an oxygen converter.

It is assumed that the process is promising for further increases in the strength of railroad rails and reduction of the expense of their production. 5 figures; 4 tables; 5 biblio. refs.

1/1

- 20 -

1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--MIXING IN AN OXYGEN CONVERTER BATH -U-
AUTHOR--(03)-BLINOV, K.A., AFANASYEV, S.G., KVITKO, N.P.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MER. 1970, 13(1) 39-42
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--OXYGEN, BLAST FURNACE, MOLTEN METAL, MATERIAL MIXING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1988/0948 STEP NO--UR/0148/70/013/001/0039/0042
CIRC ACCESSION NO--AT0105817
UNCLASSIFIED

272 018

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AT0105817

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF THE ENERGY OF O AND OF THE BOILING GAS BUBBLES ON THE MIXING INTENSITY IN THE METAL BATH IN A 10 TON CONVERTER WAS STUDIED DURING VARIOUS PERIODS OF CONVERTER OPERATION. AN EQUATION IS DERIVED FOR THE ENERGY (N) WHICH IS GIVEN UP BY THE O TO THE METAL BATH AT THE MOMENT OF THEIR CONTACT: $N \text{ EQUALS } 0.385 \text{ RW PRIME}^3 \text{ D PRIME}^2$, WHERE R IS THE D. OF THE O STREAM IN KG-M PRIME³, W IS THE RATE OF THE STREAM AT ITS AXIS IN M-SEC, AND D IS THE DIAM. OF THE GAS STREAM AT ITS CONTACT WITH THE METAL BATH IN M. ANOTHER EQUATION IS DERIVED FOR THE MIXING ENERGY ORIGINATING FROM GAS BUBBLES (N SUBC) AS WELL AS FOR THE MAX. DEPTH FROM WHICH THESE GAS BUBBLES RISE. THE CALCNS. SHOWED THAT DURING THE 1ST 20-5PERCENT OF THE BLAST TIME THE GAS BUBBLES FLOAT UP FROM A LEVEL 20PERCENT OF BATH DEPTH, WHILE DURING THE REMAINING TIME THE GAS BUBBLES RISE FROM THE BOTTOM OF THE BATH. IN EVALUATING THE MIXING EFFECT, IT IS NECESSARY TO TAKE INTO ACCOUNT THE ENERGY GIVEN UP BY THE GAS STREAM TO THE METAL BATH (ESP. IMPORTANT AT THE START OF THE BLAST OPERATION).

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--DEPHOSPHORIZATION OF METAL WITH LOW CONCENTRATIONS OF MANGANESE IN
A CONVERTER BATH -U-
AUTHOR-(03)-YUGOV, P.I., AFANASYEV, S.G., KVLIKO, M.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MET. 1970, 13(4), 68-71

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--REFINING FURNACE, METAL OXYGEN CONVERSION, LIMESTONE, PIG
IRON, STEEL PRODUCTION, PHOSPHOROUS, MANGANESE CONTAINING ALLOY,
METALLURGIC SLAG, MANGANESE OXIDE, ALLOY COMPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3005/0819

STEP NO--UR/014B/T0/013/004/0058/0071

CIRC ACCESSION NO--AT0132909

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132909

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS ARE PRESENTED OF AN INVESTIGATION OF DEPHOSPHORIZATION CONDITIONS IN A 10 TON C CONVERTER DURING BLOWING OF LOW MN PIG IRON. LIMESTONE (85-90PERCENT CaO) WAS USED AS THE SLAG FORMING MATERIAL. A PORTION OF THE MELT WAS PREPD. BY THE USE OF MN ORE AND, FOR COMPARISON PURPOSES, ON BASIC PIG IRON CONTG. 1.2PERCENT MN. FOR ALL 3 VARIANTS THE LARGEST AMT. OF MELT CORRESPONDS TO THE MIN. P CONCNS. IN THE METAL (LESS THAN 0.02PERCENT), I.E., ALL 3 VARIANTS PROVIDE FOR OPTIMUM CONDITIONS OF SUCCESSFUL DEPHOSPHORIZATION.

THE FUNDAMENTAL TECH. FACTOR S EYG. THE DEGREE OF DEPHOSPHORIZATION DURING THE CONVERSION OF LOW MN PIG IRON ARE THE STATE OF OXIDN. AND THE BASICITY OF THE SLAG. DECREASING THE MN CONTENT IN THE METAL HELPS ACHIEVE LOWER P CONCNS. WITH INCREASED MnO CONC. IN THE SLAG TO A GIVEN LIMIT THE DEPHOSPHORIZATION OF THE METAL OUGHT TO IMPROVE, WHEREUPON IT SHOULD AGAIN DETERIORATE. A REDN. OF P IN MELTS CONTG. MN ORE IS OBSD. AND AN ATTEMPT IS MADE TO EXPLAIN THIS PHENOMENON. A DECREASE IN THE SLAG QUANTITY PRESENT WORSENS THE DEPHOSPHORIZATION CONDITIONS, SINCE AT THE SAME DISTRIBUTION COEFF. THE AMT. OF P REMOVED INTO THE SLAG DECREASES. THE REMOVAL OF P IS ALSO INHIBITED WHEN MN IS BEING REDUCED DURING THE COURSE OF THE PROCESS.

UNCLASSIFIED

Antennas

USSR

UDC: 621.396.67:624.97(088.8)

KABANOV, V. S., YUR'YEV, B. V., KVITKO, Ya. A., Central Scientific Research and Design Institute for Metal Construction Elements

"A Portable Support"

USSR Author's Certificate No 279015, filed 13 Jun 69, published 16 Nov 70 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 62112 P)

Translation: The proposed portable support for antenna structures includes a collapsible tube with hinged telescoping struts, flexible guys and a hydraulic drive. To accelerate the process of setting up the support and increase rigidity, the device is made with rigid rods which interact with the rods of the hydraulic drive. Each of these rigid rods is hinged at one end to the stationary section of the collapsible tube.

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USSR

UDC 616.931-02:616.9-036.2

BIRKOVSKIY, Yu. Ye., MILOVANOV, L. P., SHIMANSKIY, O. V., KYITKO, Ya. G.,
VOYTER, A. S., BAZILEVA, A. M., and MODOVSKAYA, F. Ya., Kiev

"Epidemiological Significance of Mild Atypical Forms of Diphtheria Under Present Conditions"

Kiev, Vrachebnoye Delo, No 8, Aug 70, pp 145-149

Abstract: The incidence of diphtheria in the USSR has declined sharply since the end of World War II, from 150 per 100,000 population in 1944 to only sporadic cases in 1966. However, this decrease in the diphtheria rate has not been matched by a corresponding decline in the number of carriers of diphtheria bacilli. Studies conducted in 1964 and 1965 in Kiev revealed that 2.5% of all healthy children examined, and about 15% of children in boarding schools and similar groups, were carriers. The disparity between the incidence of diphtheria and the number of carriers is thought to be due largely to a failure to diagnose mild, atypical forms of the disease. These forms are common in immunized children, in whom the characteristic symptoms include subfebrile temperature, mildly hyperemic throat, and slight enlargement of the lymph nodes. The number of cases of children with sore throat who also carry diphtheria bacilli is increasing from year to year. The carrier state and sore throat may be regarded as interrelated.

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USSR

UDC 621.311.21.001.42.001.57

KRIVCHENKO, G. I., ARSHENEVSKIY, N. N., KRYATKOVSKAYA, Ye. V.

"Studies of the Nonsteady State Operating Conditions of Hydroelectric Power Plants"

Sb. tr. po gidrotekhn. i gidrostr-vu. (Collected Works on Hydroengineering and Hydropower Construction), Moscow, Nauka Press, 1970, pp 192-205 (from RZh-Elektrotehnika i Energetika, No 4, Apr 71, Abstract No 4 D133)

Translation: The procedure for calculating the transient processes and selecting optimal hydroturbine regulating conditions was improved on the basis of natural and model studies of the behavior of hydroturbines in a broad range of operating conditions, including running up and running down. In a number of cases, application of this procedure permits proof of the possibility of constructing closed-delivery conduits without UR with inertial constants up to 4-6 seconds and more. Examples of hydroelectric power plants are pre-setned (Nurek, Charvak, Kuban'-Kalauskiya, and others) providing a basis for doing away with UR. In selecting the turbine regulating conditions and designating the limiting rate of variation of opening of the distributor, it is proposed that the turbine characteristics be used considering the
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KRIVCHENKO, G. I., et al., Sb. tr. po gidrotekhn. i gidrostr-vu. (Collected Works on Hydroengineering and Hydropower Construction), Moscow, Nauka Press, 1970, pp 192-205 (from RZh-Elektrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 D133)

hydraulic impact for the given law of variation of the opening with time. As applied to the underground version of the Toktogul Hydroelectric Power Plant, a procedure is described for determining the instantaneous pressure diagrams under the runner during the entire process of nonsteady state operating conditions. The diagrams obtained make it possible to establish the deep vacuum regions for individual points in time. For hydroelectric power plants with long closed delivery conduits a procedure and research results are presented with respect to establishing the possible deviations caused by the nonstationarity of the operating conditions. For hydroelectric power plants with adjustable blade turbines, variation of the direction of the axial force on the runner, occurrences of deep vacuum under the top of the turbine and the possibility of discontinuity of the flow beyond the distributor and the runner and significant accelerating rpm are considered. There are 45 illustrations and an 18-entry bibliography.

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USSR

UDC 621.347.713.004.57

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RUBAN, I. G., KVITKOVSKIY, V. I.

"Superhigh Frequency Power Instability Meter"

USSR Author's Certificate No 252420, Filed 25 Apr 68, Published 12 Feb 70,
(from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9A138P)

Translation: A superhigh frequency power instability meter containing a modulator-synchronizer is proposed. The meter regulates the element, the reference voltage source and the autobalancing thermistor bridge. The purpose of the invention is to increase the measurement accuracy. For this purpose, the output of the thermistor element is connected via an amplitude detector and a preliminary amplifier to the phase detector. The latter is connected with the modulator-synchronizer and with the regulating element connected to the reference voltage source via a measuring resistor.

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KVITNITSKAYA, N.

HYGIENIC ISSUES PERTAINING TO PLANNING AND CONSTRUCTION OF EXPERIMENTAL VILLAGES

Article by Dr. E. I. Shchegolev, N. N. Kvitnitskaya, (a. s. Lashov, M. G. Shandak, (Kiev); Moscow, Vsesoyuznyi Nauchno-Issledovatskiy Tsentr. Moscow, No 7, 2072, 22 36-501

UDC 614.79:711.1

574.5 5544
49 444 72

In the Soviet Union, much attention is given to the growth of agricultural production. In accordance with the Five-Year Plan of development of the national economy of the USSR, in 1971-1975, the mean annual agricultural output will increase by 20-22 percent, while state investments of capital for the needs of agriculture, including production, housing, and cultural building and purchase of technology will constitute 42.2 billion rubles.

The sociolistic transformation of agriculture is associated with a radical improvement of sanitary living conditions for the rural population. In defining the party strategy in this regard, the Program of the CPSU directly calls attention to the fact that "gradually, collective farm settlements and villages will be transformed into larger populated centers of the urban type with housing supplied with all amenities, municipal services, utilities, cultural and medical institutions. Villages, the cultural and living conditions for the rural population will be comparable to those of urban residents. Realization of socioeconomic and cultural and living distinctions between the city and villages is one of the present trends in the building of communism" (Consolidated Publishing House, Moscow, 1961, p. 83).

More recently major strides have been made in the area of building up rural populated regions.

However, along with the achievements in rural construction there are also substantial flaws of an architectural-planning and sanitary-hygienic nature. For example, rural construction is often out of touch with the regional planning conceptions. It follows unapproved general blueprints of homes, without types, without adhering to functional zoning of the land as to purpose, without consideration of the potential of the villages, without adhering to hygienic requirements.

Acc. Nr: **AP0051930**

Ref. Code: **UR 0219**

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i
Meditsiny, 1970, Vol 69, Nr 2, pp 41-43

ON THE SHORT-TERM TRANSPLACENTAL EFFECT OF URETHAN ON THE ORGAN
CULTURES OF EMBRYONAL PULMONARY TISSUE IN MICE

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Moscow

Predadenomatous alterations — diffuse hyperplasia of the epithelium develop in cultures of the embryonal pulmonary tissue of mice following short-term transplacental action of single high urethan doses. With the increase in the duration of the experiment their frequency augmented but no change-over of diffuse hyperplasia to a focal one or to adenoma was recorded. The results testify to the importance of not only the dosage of the substance, but also to the time of its action necessary for the blastomogenic effect of urethan to become manifest.

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1/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--DETERMINATION OF THE OPERATING CHARACTERISTICS OF THE PILOT
BEARINGS OF HYDROTURBINES -U-
AUTHOR-(051)-KVIITNITSKIY, YE. I., POLTAVSKIY, YU. D., PRIKHODKO, O. B.,
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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THEORETICAL FUNDAMENTALS FOR HYDRODYNAMIC MULTIPLE BUSHING SLIDE BEARINGS ARE INVESTIGATED FOR THE CASE OF THEIR STATIC LOAD. SIMILAR BEARINGS ARE USED AS GUIDE SUPPORTS OF HYDRAULIC UNITS. CONCRETE RESULTS ARE PRESENTED FOR THE DESIGN OF THE PILOT BEARING OF A HYDROTURBINE, WHICH IS INSTALLED AT THE MAIN HYDROELECTRIC POWER STATION OF THE VAKHSHSKIY CASCADE.

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